

BLUEFISH TABLES

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Table 1. Summary of Atlantic coast bluefish commercial and recreational catch.

Year	Commercial Landings (mt)	Commercial Landings (000 lbs)	Commercial Landings (000s)	Recreational Landings (000s)	Recreational Discards (000s)	Recreational Discards (000s)	Recreational Catch (000s)	Recreational Landings (mt)	Recreational Discards (mt)	Recreational Catch (mt)	Total Catch (000s)	Total Catch (mt)
1974	4,538	10,005										
1975	4,402	9,705										
1976	4,546	10,022										
1977	4,802	10,587										
1978	4,986	10,992										
1979	5,693	12,551										
1980	6,857	15,117										
1981	7,465	16,457										
1982	6,997	15,426	7,699	23,724	3,497	525	24,248	37900	838	38,738	31,947	45,735
1983	7,166	15,798	5,556	24,884	5,254	788	25,672	41159	1,304	42,463	31,228	49,629
1984	5,380	11,861	5,849	20,798	5,710	857	21,654	31089	1,280	32,369	27,503	37,749
1985	6,122	13,497	4,340	19,246	3,228	484	19,730	24035	605	24,640	24,070	30,762
1986	6,651	14,663	6,658	24,441	5,970	895	25,336	43607	1,598	45,205	31,994	51,856
1987	6,578	14,502	4,467	21,076	6,527	979	22,055	36255	1,684	37,939	26,522	44,517
1988	7,161	15,787	3,805	9,905	3,460	519	10,424	22773	1,193	23,966	14,229	31,127
1989	4,740	10,450	2,978	13,600	5,037	756	14,356	18772	1,043	19,815	17,334	24,555
1990	6,250	13,779	3,605	11,365	5,081	762	12,127	14750	989	15,739	15,732	21,989
1991	6,160	13,580	7,747	11,943	6,349	952	12,895	16153	1,288	17,441	20,642	23,601
1992	5,205	11,475	10,063	7,158	4,242	636	7,794	12031	1,070	13,101	17,857	18,306
1993	4,808	10,600	1,969	5,725	4,200	630	6,355	9979	1,098	11,077	8,324	15,885
1994	4,304	9,489	2,325	5,768	6,152	923	6,691	7884	1,261	9,145	9,016	13,449
1995	3,628	7,998	2,068	5,168	5,326	799	5,967	7303	1,129	8,432	8,035	12,060
1996	4,113	9,068	1,842	4,205	5,316	797	5,002	6276	1,190	7,466	6,844	11,579
1997	4,064	8,960	2,955	5,413	7,161	1,074	6,487	7730	1,534	9,264	9,443	13,328
1998	3,741	8,246	3,161	4,202	5,002	750	4,952	6585	1,176	7,761	8,113	11,501
1999	3,334	7,351	2,411	3,682	7,806	1,171	4,853	5379	1,711	7,090	7,264	10,424
2000	3,659	8,066	2,662	4,897	11,363	1,705	6,602	6196	2,157	8,353	9,264	12,011
2001	3,945	8,698	2,823	6,663	13,749	2,062	8,726	7533	2,332	9,865	11,549	13,810
2002	3,119	6,876	2,142	5,300	9,917	1,488	6,788	6596	1,851	8,447	8,930	11,566
2003	3,359	7,406	2,161	6,045	8,996	1,349	7,395	7967	1,778	9,745	9,555	13,105
2004	3,783	7,200	1,847	6,939	11,739	1,761	8,700	6870	1,743	8,613	10,547	12,396

Table 2. Bluefish Atlantic coast commercial landings (mt) by state.

Year	ME	NH	MA	RI	CT	NY	NJ	DE	MD	VA	NC	SC	GA	FL	mt
1950			27.8	25.4	9.5	57.7	587.7	9.4	47.8	141.4	576.9	4.7		448.9	1,937.2
1951			12.9	16.7	24.8	86.7	499.1	2.2	38.4	81.3	420.0	5.3		649.2	1,836.6
1952			0.4	21.9	40.8	94.3	653.0	0.4	50.4	65.2	334.2	5.0		505.8	1,771.4
1953			13.6	36.4	25.2	73.7	409.4	1.1	20.9	79.4	245.7	3.2		500.6	1,409.2
1954			14.0	41.6	11.0	182.1	572.0	1.0	40.4	83.8	146.6	3.6		364.9	1,461.0
1955			16.8	14.2	14.3	212.7	460.3	1.2	28.7	99.7	197.3	17.7		459.4	1,522.3
1956			8.7	21.2	5.9	168.2	502.9	1.5	46.0	101.6	287.1	24.2		349.7	1,517.0
1957			11.2	26.9	8.6	189.7	415.7	1.9	42.0	87.5	370.1	32.4		502.2	1,688.2
1958			1.4	4.5	1.0	52.3	41.2	2.8	14.7	70.6	198.2	1.1		383.3	771.1
1959			2.4	8.9	2.6	118.7	170.4	2.0	13.5	82.8	335.8	0.6		582.2	1,319.9
1960			6.9	15.5	2.5	187.9	200.9	0.2	4.7	59.1	278.7	0.1		494.5	1,251.0
1961			8.1	22.2	4.9	229.2	209.3		8.6	133.2	341.3	0.4	0.2	444.2	1,401.6
1962			15.5	49.6	14.3	344.0	495.1	3.7	28.9	237.8	433.0	2.1		631.8	2,255.8
1963			21.5	37.2	23.5	316.0	373.3	9.7	18.9	286.9	368.5	51.7		618.1	2,125.3
1964			18.9	41.0	27.4	306.2	245.5		2.9	179.2	233.5	143.5		545.1	1,743.2
1965			64.7	49.0	27.0	470.0	394.7	0.1	3.2	93.2	319.2	38.3		387.7	1,847.1
1966			57.5	32.6	25.2	423.2	457.3	0.4	7.7	109.5	372.1	71.8	0.2	614.0	2,171.5
1967			31.9	36.1	28.2	249.5	227.8	0.1	7.9	54.5	402.7	21.6		610.8	1,671.1
1968			39.5	36.9	28.2	261.3	346.9	0.2	63.9	109.4	395.7	10.8		866.7	2,159.5
1969			68.2	56.1	37.8	507.8	308.6		24.4	101.2	395.1	2.4		943.6	2,445.2
1970			76.7	146.3	38.4	726.5	482.4		31.4	292.7	224.9	3.8		928.1	2,951.2
1971	0.7		124.2	122.9	37.5	549.2	444.1		64.1	277.0	262.1	5.9		737.2	2,624.9
1972			168.9	141.9	22.4	455.0	368.1	0.3	26.5	551.6	529.6			850.8	3,115.1
1973	26.8		252.1	126.0	43.7	640.2	402.6	1.2	124.8	1,317.8	910.9	1.4		718.0	4,565.5
1974	13.4		177.0	121.0	40.3	484.0	455.0	2.7	253.6	1,423.1	990.4	0.1		577.3	4,537.9
1975	5.2		249.3	173.0	6.7	403.3	581.1	6.8	125.5	1,490.2	896.0	1.0	0.2	463.2	4,401.5
1976	0.2		204.1	109.7	10.5	272.1	580.6	5.3	232.7	1,890.1	614.9	0.4		625.8	4,546.4
1977	0.1	0.1	228.5	111.0	5.6	447.1	634.1	14.6	237.6	1,437.5	1,057.5	4.6	0.3	622.9	4,801.5
1978	14.7	1.1	361.9	169.6	24.8	792.1	718.9	18.3	147.2	1,243.1	883.6	4.4	0.1	605.8	4,985.6
1979	30.5	0.2	257.0	146.6	23.1	731.0	720.8	22.9	144.7	1,389.9	1,544.8	5.9	0.1	675.4	5,692.9
1980	43.6	0.6	314.5	165.6	22.4	674.9	635.3	74.4	198.1	1,277.8	2,469.2	1.5		978.9	6,856.8
1981	41.0	20.5	372.1	160.4	141.5	580.7	832.1	88.9	188.5	1,061.6	2,997.0	1.3	0.5	978.7	7,464.8
1982	74.8	30.3	406.1	270.5	136.1	781.4	898.5	231.8	131.1	1,176.2	1,945.9	2.8	0.3	910.8	6,996.6
1983	77.1	13.9	453.6	235.6	31.5	765.3	873.0	131.7	149.8	689.4	3,060.5	5.1	0.1	679.8	7,166.4
1984	22.0	8.0	318.3	462.3	45.3	742.1	767.3	71.3	83.9	525.2	1,614.5	0.6		719.1	5,379.9
1985	41.0	10.3	362.2	767.8	82.4	967.6	902.0	85.3	231.0	749.8	1,633.9	0.2		288.5	6,122.0
1986	46.9	27.7	708.6	518.4	86.2	733.6	1,362.3	181.5	207.0	686.4	1,561.9	1.3	0.8	528.6	6,651.2
1987	47.9	58.0	361.6	537.4	79.7	709.7	1,148.4	160.8	164.9	536.3	2,068.8	1.5	1.2	702.2	6,578.4
1988	4.0	10.4	365.7	464.4	46.3	510.4	1,126.5	94.9	467.8	1,186.4	2,285.6	1.6	0.3	597.1	7,161.4
1989	34.4	62.2	562.3	549.7	88.0	256.2	717.8	47.3	125.1	349.5	1,492.8	1.2		453.4	4,739.9
1990	24.5	89.4	546.1	537.4	81.2	731.2	984.8	65.3	129.4	495.0	2,075.9	0.5		488.9	6,249.6
1991	56.7	57.7	343.0	676.1	116.8	716.0	1,110.2	153.1	105.8	373.5	1,777.9	0.6		672.5	6,159.9
1992	39.2	103.5	376.3	703.1	121.9	677.1	997.0	42.0	93.6	269.1	1,287.8	0.3	0.1	494.2	5,205.2
1993	8.3	73.7	288.5	542.0	61.0	702.6	994.0	13.4	60.5	294.7	1,226.4	0.1		543.1	4,808.3
1994	24.5	124.8	543.2	409.0	68.9	667.6	858.2	15.6	74.7	284.7	808.5	0.8		423.4	4,303.9
1995	8.8	84.8	252.9	350.2	53.2	590.3	384.5	16.6	48.8	243.7	1,365.4			228.6	3,627.8
1996	5.5	72.5	409.2	291.1	45.9	719.8	731.0			279.4	1,496.3	0.9		60.9	4,112.5
1997	1.2	28.3	197.0	270.6	32.7	682.5	559.3	13.3		335.5	1,815.3			128.6	4,064.3
1998	7.5	164.9	258.8	25.5	716.0	627.4	12.5	84.1	360.5	1,326.8			154.5	3,738.5	
1999	-	5.5	186.4	272.3	24.1	644.7	490.0	8.9	65.9	223.1	1,252.4			156.3	3,329.8
2000	0.1	10.9	128.1	157.6	15.2	843.9	608.5	13.2	38.2	241.7	1,525.3			64.2	3,646.9
2001		5.3	158.1	219.3	20.8	624.3	583.6	8.5	59.2	358.8	1,844.3	0.2		62.7	3,945.1
2002	0.4	2.4	184.5	254.6	24.6	669.1	601.0	20.8	51.5	215.6	1,054.2			37.1	3,115.8
2003	0.3	3.9	150.2	189.6	20.3	707.6	459.2	13.9	24.0	171.5	1,574.0	0.1		44.8	3,359.4
2004															

Table 3. Bluefish Atlantic coast recreational landings and discards in numbers (000s), by state.

Landings

	ME	NH	MA	RI	CT	NY	NJ	DE	MD	VA	NC	SC	GA	FL (east)	
1982	9	1	667	2,869	5,451	3,128	2,936	235	2,166	1,078	2,927	476	37	1,744	23,724
1983	39	5	1,451	3,741	1,208	5,426	3,953	341	2,124	577	4,311	148	100	1,459	24,884
1984	0	6	795	746	3,272	5,822	2,941	203	1,737	455	2,197	279	180	2,166	20,798
1985	46	-	431	1,478	3,135	3,760	2,683	120	3,642	650	1,754	431	20	1,096	19,246
1986	149	66	2,244	1,874	2,515	6,914	4,808	161	2,064	850	1,679	157	19	940	24,441
1987	289	74	1,420	825	2,535	5,386	4,727	100	2,241	565	1,738	164	44	967	21,076
1988	63	32	693	440	664	1,454	1,754	255	1,229	437	1,822	87	8	968	9,905
1989	38	23	412	487	1,468	3,984	2,889	324	711	707	1,605	226	16	711	13,600
1990	47	27	416	447	1,034	2,738	2,177	242	707	743	2,229	76	43	439	11,365
1991	115	41	840	441	1,729	3,471	2,012	147	953	666	821	39	24	643	11,943
1992	95	24	345	250	1,185	1,196	1,908	189	367	163	682	33	8	715	7,158
1993	29	28	511	188	825	1,440	656	138	217	66	723	81	5	818	5,725
1994	66	18	434	297	512	1,605	941	120	473	231	452	118	4	497	5,768
1995	9	12	405	126	608	1,042	1,243	183	285	213	387	154	15	487	5,168
1996	10	3	285	361	624	545	957	136	346	324	299	55	4	256	4,205
1997	13	25	316	412	519	816	942	159	433	447	742	89	5	494	5,413
1998	2	3	237	194	387	768	817	150	284	223	527	171	22	418	4,202
1999	8	4	197	330	440	710	809	84	167	134	518	34	12	235	3,682
2000	-	1	221	280	390	718	1,236	132	344	150	878	88	20	439	4,897
2001	15	8	357	365	716	1,005	1,431	102	429	261	1,266	118	10	581	6,663
2002	24	19	229	325	569	751	1,321	117	199	131	777	79	2	759	5,300
2003	14	8	374	334	458	1,147	1,571	89	214	172	953	66	1	644	6,045
2004	18	22	426	273	552	1,442	1,818	133	318	256	1,057	119	1	504	6,939

Discards

	ME	NH	MA	RI	CT	NY	NJ	DE	MD	VA	NC	SC	GA	FL (east)	
1982	3	-	59	152	886	197	346	47	690	452	301	107	53	204	3,497
1983	2	1	636	42	64	1,743	784	36	711	170	765	17	67	214	5,254
1984	-	-	354	55	257	2,570	709	89	512	138	242	77	37	671	5,710
1985	8	1	160	123	327	955	537	34	257	118	333	182	38	155	3,228
1986	25	23	1,318	71	155	1,852	1,162	44	287	315	449	48	29	192	5,970
1987	191	8	639	268	291	1,879	1,697	64	478	181	545	47	33	206	6,527
1988	23	2	298	70	27	735	437	35	266	715	550	64	7	229	3,460
1989	5	17	266	86	131	1,474	1,084	191	446	294	750	145	22	127	5,037
1990	36	6	308	317	228	1,262	1,062	104	388	280	728	66	132	165	5,081
1991	327	24	579	195	552	1,367	1,545	59	369	451	551	17	66	246	6,349
1992	67	13	451	235	415	784	536	122	99	278	796	16	44	388	4,242
1993	18	22	390	153	261	975	561	105	194	163	784	56	22	495	4,200
1994	52	8	350	201	282	1,171	894	46	246	462	1,481	140	20	799	6,152
1995	5	7	585	70	171	719	637	127	273	417	1,201	221	85	808	5,326
1996	57	3	467	439	367	661	959	83	465	420	736	86	26	547	5,316
1997	83	3	644	320	293	898	849	193	891	662	1,149	197	20	956	7,161
1998	-	1	510	203	405	589	702	275	492	405	534	200	71	615	5,002
1999	20	5	397	784	744	1,156	1,824	323	605	228	986	59	14	661	7,806
2000	4	1	596	497	863	2,629	1,907	303	1,150	321	1,630	182	79	1,201	11,363
2001	40	14	948	893	1,429	2,543	2,056	221	1,074	625	2,329	152	48	1,376	13,749
2002	42	14	628	801	662	1,017	2,168	435	577	382	1,610	163	26	1,392	9,917
2003	23	17	1,019	932	542	1,305	1,913	120	518	340	1,416	215	23	622	9,004
2004	39	10	1,490	749	1,015	1,848	2,333	319	669	510	1,930	352	17	457	11,740

Table 4. Number of bluefish sampled from commercial fisheries, 1997-2004

Maine to Maryland					Virginia				North Carolina				NC Bait Fishery					
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	sum	Jan-Jun	Jul-Dec	sum	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	sum	Jan-Jun	Jul-Dec	sum		
1997	small		200	106		small	39	214		small	585	322	103		1997	91	294	
	med	100	83	69	156	med	851	1,562		med	195	382	296	428	1998	298	487	
	large		200	104	59	large	39	45		large	225	16	1	183	1999	49	471	
	unclassified	59	37	77		unclassified	739	736		unclassified	163	543	337	134	2000	64	196	
1998					1,250										2001	369	590	
	small		545	213		small	644	444		small	21	120	193	-	2002	36	308	
	med		115			med	543	674		med	189	1,383	491	193	2003	84	198	
	large		100	295		large	80	141		large	459	108	-	220	2004	40	114	
	unclassified		202	36		unclassified	443	642		unclassified	142	121	215	138				
1999					1,506										3,913			
	small		133	205		small	225	263		small	3	46	34	71				
	med					med	523	741		med	1,311	1,893	434	56				
	large		446	58		large	469	513		large	1,605	116	43	262				
	unclassified		741		106	unclassified	78	267		unclassified	14	351	88	61				
2000					1,751										3,611			
	small		202			small	228	487		small	137	180	45	45				
	med	100				med	1,609	1,775		med	190	1,013	1,196	837				
	large	101	292	115		large	107	107		large	1,784	817	-	289				
	unclassified	14	207	144	53	unclassified	188	390		unclassified	419	547	253	339				
2001					1,228										3,079			
	small		190			small	621	340		small	517	390	222	71				
	med		100			med	483	401		med	1,995	2,277	602	105				
	large		102	200		large	304	304		large	2,133	859	2	258				
	unclassified		183	325	71	unclassified	465	337		unclassified	64	1,038	401	150				
2002					1,257										4,891			
	small	29	173	205		small	638	599		small	138	252	72	200				
	med		130	200		med	585	1,854		med	1,282	397	808	472				
	large		162			large	571	511		large	1,245	697	78	507				
	unclassified		82	199	29	unclassified	363	533		unclassified	798	423	397	174				
2003					1,209										3,255			
	small					small	238	535		small	308	210	35	2				
	med		296			med	704	798		med	535	1,117	626	256				
	large		308	259	20	large	517	636		large	2,050	982	-	352				
	unclassified		235	201		unclassified	485	226		unclassified	74	706	296	112				
2004					1,430										5,654			
	small		82	99		small	874	728		small	180	266	20	72				
	med		410	338	220	med	318	366		med	1,600	589	526	953				
	large		796	1,310	1,031	large	100	106		large	1,704	1,337	34	813				
	unclassified					unclassified	42	330		unclassified	135	542	500	221				
					4,498										4,139			
															2,864			
																7,661		
																	9,492	

Table 5. Commercial Landings (lbs) 1997-2004 by period and market category.

Maine to Maryland				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
1997				
small	3,695	14,141	154,541	110,241
med	11,518	118,090	277,440	219,531
large	2,698	209,369	133,583	152,033
unclassified	16,640	464,768	1,376,305	767,592
1998				
small	3,079	57,835	281,823	142,208
med	1,440	146,177	191,597	286,039
large	713	149,937	199,127	195,526
unclassified	7,035	517,516	1,152,656	849,453
1999				
small	1,018	46,824	133,366	87,347
med	2,993	143,095	115,502	167,659
large	7,574	213,049	113,921	338,687
unclassified	12,437	536,672	1,213,209	609,587
2000				
small	2,507	19,981	181,189	115,596
med	9,474	99,906	112,652	196,955
large	8,403	323,479	454,581	265,733
unclassified	3,379	601,200	1,114,944	492,573
2001				
small	322	9,289	93,506	104,163
med	2,476	274,137	159,410	139,296
large	6,826	456,436	199,838	232,986
unclassified	1,681	578,576	1,017,276	425,346
2002				
small	6,747	24,477	217,447	177,921
med	12,658	447,093	133,368	130,594
large	25,784	452,286	116,171	163,468
unclassified	19,756	547,697	1,035,984	476,146
2003				
small	1,191	15,807	48,405	39,659
med	6,349	200,954	185,263	267,065
large	177	232,656	241,607	220,684
unclassified	3,216	518,530	902,272	575,081
2004				
small	8,580	16,895	88,661	52,718
med	618	307,278	320,655	264,529
large	4,666	394,904	433,748	283,542
unclassified	126	258,965	671,507	553,357

Virginia		
	Jan-Jun	Jul-Dec
small	1,928	11,916
med	9,235	62,468
large	4,493	44,091
unclassified	68,434	447,676

North Carolina				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
1997	20,107	57,263	28,700	50,354
med	178,225	286,149	160,727	276,594
large	1,636,777	130,059	15,541	1,164,687
unclassified	257	1,957	2,601	17,077

NC Bait Fishery-(Estimated Landings)		
	Jan-Jun	Jul-Dec
1997	10,966	36,006
1998	8,038	21,881
1999	51,720	22,348
2000	16,909	12,621
2001	47,337	10,827
2002	1,488	11,876
2003	8,316	14,279
2004	15,935	10,185

1999		
	Jan-Jun	Jul-Dec
small	6,551	30,150
med	539,873	323,615
large	1,383,285	266,671
unclassified	1,761	40,245

2000		
	Jan-Jun	Jul-Dec
small	6,647	32,420
med	33,911	164,172
large	1,876,457	603,066
unclassified	493	7,526

2001		
	Jan-Jun	Jul-Dec
small	16,829	34,968
med	694,722	340,709
large	1,829,400	460,128
unclassified	10,402	42,816

2002		
	Jan-Jun	Jul-Dec
small	9,657	20,067
med	249,253	95,284
large	1,103,802	141,567
unclassified	1,623	16,436

2003		
	Jan-Jun	Jul-Dec
small	25,251	29,979
med	448,955	388,941
large	1,258,917	422,787
unclassified	4,635	45,378

2004		
	Jan-Jun	Jul-Dec
small	4,466	20,881
med	391,836	308,364
large	1,477,056	418,753
unclassified	31,016	8,897

Table 6. Relative Commercial Sampling (fish measured per 100 lbs landed) 1997-2004

Maine to Maryland				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
1997				
small	-	-	0.13	0.10
med	0.87	0.07	0.02	0.07
large	-	0.10	0.08	0.04
unclassified	-	0.01	0.00	0.01
1998				
small	-	-	0.19	-
med	-	0.08	-	0.07
large	-	0.07	0.15	-
unclassified	-	-	0.02	0.00
1999				
small	-	0.28	0.15	-
med	-	-	0.05	-
large	-	0.21	0.05	-
unclassified	-	0.14	-	0.02
2000				
small	-	-	0.11	-
med	1.06	-	-	-
large	1.20	0.09	0.03	-
unclassified	0.41	0.03	0.01	0.01
2001				
small	-	-	0.20	-
med	-	0.04	-	0.06
large	-	-	0.05	0.09
unclassified	-	0.03	0.03	0.02
2002				
small	0.43	-	0.08	0.12
med	-	0.03	0.15	-
large	-	0.04	-	-
unclassified	-	0.01	0.02	0.01
2003				
small	-	-	-	-
med	-	0.15	-	0.04
large	-	0.13	0.11	0.01
unclassified	-	0.05	0.02	-
2004				
small	-	-	0.09	0.19
med	-	-	-	0.08
large	-	0.10	0.08	0.08
unclassified	-	0.31	0.20	0.19

Virginia				
	Jan-Jun	Jul-Dec		
small	2.02	1.80		
med	9.21	2.50		
large	0.87	0.10		
unclassified	1.08	0.16		
small	41.68	3.98		
med	1.56	1.22		
large	0.92	0.22		
unclassified	0.41	0.19		
small	7.33	3.32		
med	1.98	3.80		
large	9.85	6.47		
unclassified	0.12	0.11		
small	5.89	8.87		
med	12.48	3.34		
large	0.75	1.17		
unclassified	0.32	0.12		
small	23.89	4.73		
med	1.36	0.83		
large	13.88	0.97		
unclassified	0.27	0.08		
small	472.59	10.33		
med	5.68	3.92		
large	10.73	17.58		
unclassified	0.53	0.18		
small	820.69	16.12		
med	2.39	3.21		
large	41.83	7.55		
unclassified	0.51	0.12		
small	1,092.08	17.39		
med	6.60	0.74		
large	2.01	0.18		
unclassified	0.13	0.13		

North Carolina				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
small	-	1.02	1.12	0.20
med	0.11	0.13	0.18	0.15
large	0.01	0.01	0.01	0.02
unclassified	63.42	27.75	12.96	0.78
small	0.13	0.22	2.14	-
med	0.07	0.26	0.61	0.09
large	0.04	0.07	-	0.09
unclassified	0.44	0.68	7.15	4.72
small	0.05	0.15	0.51	0.68
med	0.24	0.58	0.79	0.22
large	0.12	0.04	1.46	0.43
unclassified	0.80	0.87	8.06	11.05
small	2.06	0.56	0.23	0.27
med	0.56	0.62	0.82	0.25
large	0.10	0.14	-	0.28
unclassified	84.99	7.27	9.16	2.79
small	3.07	1.12	1.18	0.34
med	0.29	0.67	0.60	0.22
large	0.12	0.19	0.04	0.06
unclassified	0.62	2.42	5.15	6.42
small	1.43	1.26	0.67	1.04
med	0.51	0.42	1.03	0.44
large	0.11	0.49	0.32	0.12
unclassified	49.17	2.57	6.02	4.02
small	1.22	0.70	0.83	0.05
med	0.12	0.29	0.59	0.32
large	0.16	0.23	-	0.06
unclassified	1.60	1.56	2.65	0.81
small	4.03	1.27	0.19	0.66
med	0.41	0.19	0.51	0.47
large	0.12	0.32	0.29	0.11
unclassified	0.44	6.09	12.14	1.24

Table 7. Sampling intensity of bluefish length collected from the recreational fishery, by wave,
Maine to Florida (east coast).

Samples collected (# fish measured)

wave	Year							
	1997	1998	1999	2000	2001	2002	2003	2004
Jan-Feb	16	12	68	38	64	49	81	22
Mar-Apr	115	292	283	201	261	127	188	94
May-Jun	680	911	636	577	1,100	579	1,183	910
Jul-Aug	1,575	937	571	563	1,255	863	910	1,577
Sep-Oct	1,363	915	702	825	1,366	1,306	820	1,632
Nov-Dec	643	286	223	167	278	352	309	319
total	4,392	3,353	2,483	2,371	4,324	3,276	3,491	4,554

Landings (00s lbs)

wave	Year							
	1997	1998	1999	2000	2001	2002	2003	2004
Jan-Feb	1,163	1,638	714	1,430	2,325	1,451	1,564	2,014
Mar-Apr	1,968	4,102	3,719	1,754	4,712	2,237	2,935	4,610
May-Jun	22,781	28,133	19,622	22,152	30,387	20,644	43,281	31,685
Jul-Aug	44,753	50,075	15,134	37,119	46,930	20,909	32,042	46,060
Sep-Oct	47,640	30,267	39,774	38,538	38,885	49,632	41,629	55,144
Nov-Dec	24,713	9,125	3,568	5,065	9,059	18,842	9,908	11,942
total	143,018	123,340	82,531	106,058	132,298	113,715	131,359	151,455

Samples per 00 lbs landed

wave	Year							
	1997	1998	1999	2000	2001	2002	2003	2004
Jan-Feb	0.014	0.007	0.095	0.027	0.028	0.034	0.052	0.011
Mar-Apr	0.058	0.071	0.076	0.115	0.055	0.057	0.064	0.020
May-Jun	0.030	0.032	0.032	0.026	0.036	0.028	0.027	0.029
Jul-Aug	0.035	0.019	0.038	0.015	0.027	0.041	0.028	0.034
Sep-Oct	0.029	0.030	0.018	0.021	0.035	0.026	0.020	0.030
Nov-Dec	0.026	0.031	0.063	0.033	0.031	0.019	0.031	0.027
total	0.031	0.027	0.030	0.022	0.033	0.029	0.027	0.030

Table 8. Age sample sizes used in development of age length keys.
 Spring 1998-2004 VA only. 1997 NC. Autumn 1999-2000 includes VA and NC data.

Spring	0	1	2	3	4	5	6+	total
1997	-	101	76	19	9	7	16	228
1998	-							0
1999	-							0
2000	-							0
2001	-	12	32	2	2	3	11	62
2002	-	103	85	6	8	42	38	282
2003	-		147	4	13	17	45	226
2004	-	82	131	23	3		2	241

Autumn	0	1	2	3	4	5	6+	
1997	65	128	14	1				217
1998								0
1999	85	134	59	7	1	2	49	337
2000	21	108	10					140
2001		116	109		2	5	40	272
2002	7	319	56	5	1	2	5	395
2003	34	51	12		6	41	70	214
2004		132	28	6				166

Table 9. Total Atlantic coast bluefish catch at age (000s). CAA for 1982 to 1996
adjusted from SAW 23 to reflect updated landings estimates.

	Age						
	0	1	2	3	4	5	6+
1982	11,158	9,746	2,848	2,435	797	1,217	3,746
1983	4,783	7,661	8,675	3,024	972	1,326	4,787
1984	7,140	6,799	6,686	2,046	898	745	3,190
1985	4,680	6,462	5,776	2,928	1,325	520	2,378
1986	5,172	8,045	8,719	2,813	1,060	1,705	4,479
1987	3,122	5,419	5,180	5,750	2,008	1,085	3,959
1988	1,708	2,081	2,517	1,591	1,985	1,599	2,748
1989	3,468	5,671	3,227	990	398	1,173	2,407
1990	2,721	7,198	1,851	691	382	428	2,461
1991	3,710	5,292	7,332	1,619	315	225	2,149
1992	2,118	9,527	1,739	2,407	596	478	993
1993	1,196	2,073	1,575	592	1,036	665	1,187
1994	1,971	3,144	1,313	368	297	850	1,073
1995	1,904	3,257	733	130	203	686	1,122
1996	1,713	2,151	632	204	209	538	1,398
1997	1,634	4,299	1,496	511	197	93	1,212
1998	683	2,754	2,786	861	261	308	459
1999	1,638	1,946	2,097	573	175	353	483
2000	667	4,396	2,693	718	97	536	156
2001	1,414	4,467	3,466	1,152	198	608	243
2002	587	5,146	1,662	543	340	237	416
2003	819	2,646	3,974	774	378	320	644
2004	421	5,149	2,222	1,226	425	461	644

Table 10. Total Atlantic coast bluefish weight at age (lbs).

1996 estimates set equal to 1995

	Age	0	1	2	3	4	5	6+
1982		0.14	0.49	1.52	2.05	3.20	4.23	6.57
1983		0.10	0.42	0.99	2.15	3.16	4.42	6.72
1984		0.10	0.41	0.93	1.83	2.91	4.48	7.19
1985		0.10	0.40	0.97	1.93	2.82	3.99	6.42
1986		0.12	0.49	1.20	2.32	3.15	4.30	6.28
1987		0.12	0.30	1.18	2.02	2.96	3.93	5.92
1988		0.17	0.40	1.00	2.05	2.84	3.56	5.59
1989		0.13	0.30	1.06	2.12	3.64	4.11	5.76
1990		0.21	0.50	0.88	1.73	3.24	4.18	5.27
1991		0.14	0.33	0.70	1.73	2.81	3.96	5.78
1992		0.16	0.39	1.04	1.89	2.80	3.30	6.08
1993		0.18	0.59	0.95	2.46	2.73	3.24	6.18
1994		0.12	0.40	0.90	1.88	3.04	3.76	6.15
1995		0.17	0.44	0.98	1.73	2.85	4.06	5.66
1996		0.17	0.44	0.98	1.73	2.85	4.06	5.66
1997		0.13	0.51	1.04	2.22	3.06	4.11	5.58
1998		0.19	0.60	0.94	2.35	3.40	4.02	6.04
1999		0.14	0.53	0.92	2.09	3.43	4.10	5.75
2000		0.17	0.46	1.00	2.72	3.51	3.61	6.02
2001		0.16	0.44	0.91	2.52	3.87	3.88	5.55
2002		0.17	0.55	1.17	2.29	2.90	3.78	5.08
2003		0.12	0.56	1.00	2.17	2.64	3.66	4.65
2004		0.08	0.45	1.32	2.14	3.27	3.75	4.64

Table 11. Bluefish recreational CPUE at age using re-transformed GLM indices.

year	Age						
	0	1	2	3	4	5	6+
1982	0.109	0.099	0.027	0.021	0.010	0.015	0.047
1983	0.042	0.061	0.067	0.026	0.009	0.011	0.044
1984	0.094	0.075	0.060	0.027	0.012	0.009	0.045
1985	0.071	0.087	0.087	0.045	0.016	0.008	0.035
1986	0.053	0.066	0.082	0.034	0.013	0.018	0.052
1987	0.035	0.064	0.063	0.065	0.023	0.014	0.052
1988	0.023	0.027	0.031	0.023	0.028	0.023	0.043
1989	0.056	0.085	0.043	0.016	0.005	0.014	0.038
1990	0.038	0.115	0.033	0.012	0.006	0.005	0.029
1991	0.047	0.059	0.060	0.028	0.005	0.003	0.029
1992	0.016	0.050	0.034	0.054	0.013	0.004	0.024
1993	0.022	0.049	0.023	0.013	0.024	0.016	0.016
1994	0.044	0.066	0.030	0.010	0.006	0.013	0.019
1995	0.029	0.092	0.017	0.004	0.006	0.017	0.014
1996	0.059	0.065	0.018	0.007	0.007	0.008	0.024
1997	0.051	0.102	0.035	0.011	0.004	0.002	0.029
1998	0.031	0.077	0.067	0.029	0.010	0.007	0.018
1999	0.116	0.098	0.071	0.029	0.008	0.009	0.017
2000	0.035	0.182	0.089	0.028	0.003	0.012	0.007
2001	0.062	0.162	0.098	0.036	0.006	0.012	0.009
2002	0.031	0.223	0.068	0.021	0.005	0.006	0.016
2003	0.035	0.096	0.135	0.025	0.008	0.010	0.020
2004	0.018	0.157	0.088	0.051	0.013	0.016	0.024

Table 12. Seasonal distribution of fisheries independent surveys evaluated. Highlighted months were chosen.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
MA trawl									x			
RI trawl									x			
CT trawl			x		x	x			x		x	
NY trawl				x	x	x	x	x	x		x	
NY beach					x	x	x	x	x		x	
NJ trawl	x		x		x			x		x		
DE juv trawl						x	x	x	x		x	
DE adult trawl		x	x	x	x	x	x	x	x	x	x	
MD beach seine							x	x	x			
VA blue seine				x	x	x	x	x	x		x	
NMFS inshore		x	x						x	x		
NMFS offshore		x	x						x	x		
SEAMAP				x	x		x	x		x	x	

Table 13. Mean number per tow or haul from fisheries independent surveys evaluated.

	Massachusetts Bottom Trawl Survey	Rhode Island Trawl Survey	Connecticut LI Sound Trawl Survey	New York Small Trawl Survey	New York Beach Seine Survey	New Jersey Ocean Trawl Survey	Delaware Adult trawl Survey	Delaware Juvenile Trawl Survey	Maryland Beach Seine Survey	Virginia Juvenile Beach Seine Survey	NEFSC Autumn inshore Trawl Survey	NEFSC Autumn offshore Trawl Survey	
1966							0.259						
1967							0.171						
1968							0.047						
1969							0.074						
1970							0.235						
1971							0.357						
1972													
1973													
1974							0.260						
1975											10.043	0.290	
1976											64.983	0.549	
1977											97.032	0.365	
1978	0.354										15.929	0.174	
1979	0.059						0.573				53.599	0.241	
1980	0.605						0.705	0.026			44.624	0.154	
1981	1.372	0.940					0.596	0.000	0.166		287.869	0.716	
1982	0.010	0.706					0.379	0.020	0.584		29.706	0.282	
1983	0.268	0.845					0.297	0.061	0.526		25.852	0.277	
1984	1.094	3.526	54.068		8.723		0.377	0.122	0.289		124.003	0.225	
1985	0.566	0.996	39.933		2.130			0.000	0.375			28.748	0.676
1986	1.507	2.950	9.808		10.897			0.387	0.091			22.165	0.268
1987	4.114	6.714	18.230	0.764	6.683			0.121	0.142			10.068	0.278
1988	0.611	1.719	15.411	0.538	6.533	25.324		0.477	0.066			9.636	0.142
1989	0.174	1.311	51.410	0.518	15.264	6.381		0.341	0.311			239.204	0.390
1990	0.324	0.927	32.739	0.318	7.306	3.834	0.759	0.088	0.238		4.531	0.239	
1991	5.442	5.179	44.362	0.352	13.545	12.784	0.394	0.194	0.121		6.808	0.089	
1992	0.000	0.594	30.306	0.125	6.200	3.172	0.240	0.292	0.109		5.098	0.252	
1993	1.604	1.598	30.582	0.114	2.959	2.278	0.629	0.072	0.039		0.828	0.214	
1994	0.580	8.419	33.339	0.200	3.102	8.362	0.320	0.104	0.083	1.211	0.966	7.426	0.324
1995	0.596	2.791	35.574	0.425	2.826	4.846	0.623	0.138	0.063	0.341	7.083	13.576	0.587
1996	0.093	2.753	44.471	0.546	5.055	2.149	0.796	0.225	0.083	0.084	2.161	11.704	0.071
1997	16.501	7.371	41.805	0.179	9.577	2.526	0.546	0.532	0.582	0.554	2.630	5.007	0.152
1998	10.779	14.660	37.021	0.234	2.054	4.982	0.696	0.236	0.120	0.399	1.674	5.316	0.185
1999	1.797	18.749	51.216	0.444	2.256	1.616	1.091	0.266	0.151	0.723	1.604	16.934	0.384
2000	0.172	0.594	27.895	0.310	3.816	1.808	0.548	0.381	0.205	0.197	1.344	4.197	0.339
2001	0.175	2.726	38.895	0.078	13.280	0.778	1.273	0.385	0.247	0.296	0.448	9.748	0.221
2002	0.135	3.393	18.214	0.095	3.253	9.642	0.968	0.321	0.080	0.811	0.929	9.104	0.193
2003	0.110	0.295	28.525	0.019	3.159	5.971	0.269	0.055	0.173		1.517	51.784	0.288
2004		2.322	29.130	0.021	2.804	3.302	0.927	0.053				12.857	0.361
Average	1.886	3.837	33.949	0.293	6.258	5.868	0.515	0.196	0.211	0.513	2.687	41.261	0.298

Table 14. Mean weight (kg) per tow or haul from fisheries independent surveys evaluated.

Rhode Island Trawl Survey	Connecticut LI Sound Trawl Survey	New Jersey Ocean Trawl Survey	Delaware Adult trawl Survey	SEAMAP	NEFSC Autumn inshore Trawl Survey
1966			0.000		
1967			0.000		
1968			0.000		
1969			0.000		
1970			0.000		
1971			0.000		
1972					
1973					
1974			0.000		
1975					6.108
1976					6.914
1977					8.418
1978					7.156
1979			0.393		8.662
1980			0.365		6.957
1981	0.136		0.386		20.983
1982	0.077		0.269		3.894
1983	0.148		0.179		4.074
1984	0.714	0.000	0.158		9.654
1985	0.214	0.000			4.200
1986	0.346	0.000			3.857
1987	0.721	0.000			3.008
1988	0.274	0.000	12.956		1.504
1989	0.204	0.000	3.417		11.681
1990	0.239	0.000	1.609	0.440	0.860
1991	0.669	0.000	2.031	0.134	1.106
1992	0.273	14.125	1.211	0.123	0.891
1993	0.343	11.376	1.013	0.346	0.145
1994	0.791	6.650	1.555	0.178	0.273
1995	0.185	11.081	1.282	0.294	1.248
1996	0.584	8.352	0.684	0.373	0.382
1997	0.616	5.977	0.701	0.241	0.559
1998	0.438	5.004	3.207	0.444	0.319
1999	1.189	6.755	0.624	0.377	0.357
2000	0.120	8.093	1.070	0.241	0.285
2001	0.288	7.224	0.404	0.627	0.101
2002	0.597	5.843	3.142	0.798	0.258
2003	0.117	8.991	1.912	0.127	0.262
2004	0.688	16.390	1.538	0.503	3.281
Average	0.415	5.517	2.256	0.250	4.567

Table 15. (cont.) Fisheries independent mean number per tow at age.
NJ Ocean Trawl survey geometric mean number per tow at age.

year	Age						
	0	1	2	3	4	5	6+
1988	23.969	0.378	0.002				
1989	5.327	0.411	0.020				
1990	3.636	0.183	0.003				
1991	12.459	0.029	0.067				
1992	2.700	0.419	0.029				
1993	2.065	0.070	0.090				
1994	8.323	0.172	0.012				
1995	4.560	0.215	0.045				
1996	2.017	0.078	0.012				
1997	2.440	0.046	0.021				
1998	4.196	0.408	0.233	0.111	0.020	0.003	0.010
1999	1.322	0.270	0.027	0.001	0.000	0.000	0.000
2000	1.308	0.366	0.095	0.036	0.002	0.000	0.000
2001	0.523	0.089	0.117	0.012	0.009	0.009	0.019
2002	6.649	2.911	0.064	0.011	0.003	0.003	0.000
2003	5.723	0.165	0.065	0.004	0.002	0.004	0.009
2004	2.182	0.708	0.322	0.033	0.012	0.027	0.020

DE Adult Trawl survey geometric mean number per tow at age.

year	Age		
	0	1	2
1990	0.299	0.450	0.009
1991	0.135	0.254	0.000
1992	0.000	0.237	0.003
1993	0.436	0.301	0.037
1994	0.005	0.314	0.000
1995	0.168	0.438	0.017
1996	0.436	0.337	0.023
1997	0.218	0.308	0.020
1998	0.191	0.439	0.066
1999	0.722	0.355	0.014
2000	0.205	0.309	0.034
2001	0.839	0.395	0.040
2002	0.444	0.509	0.016
2003	0.000	0.260	0.009
2004	0.281	0.631	0.015

Table 16. Fisheries independent indices of age-0 bluefish by cohort as determined from length distributions.

	Massachusetts Bottom Trawl Survey	Rhode Island Trawl Survey	Connecticut LI Sound Trawl Survey	New York Small Trawl Survey	New Jersey Ocean Trawl Survey	Delaware Adult trawl Survey	Delaware Juvenile Trawl Survey	VA Juvenile Beach Seine Survey	SEAMAP Survey	NMFS Fall Inshore Survey	NMFS Fall Offshore Survey
age 0	spring	summer	spring	summer	spring	summer	spring	summer	summer	spring	summer
spring and summer cohorts (not survey period)	1975									8.585	0.157
	1976									58.751	2.427
	1977									92.383	3.174
	1978	0.104	0.250				0.367	0.000		6.835	1.696
	1979	0.011	0.048				0.302	0.000	0.026	0.000	0.002
division by length	1980	0.000	0.605				0.072	0.000	0.000	49.922	0.828
summer = 1-13 cm	1981	0.173	1.199	0.678	0.263		0.067	0.000	0.020	35.993	3.875
spring=14-25 cm	1982	0.000	0.011	0.151	0.555		0.000	0.000	0.000	261.778	13.787
(unless otherwise obvious breaks in length frequency for upper end of spring)	1983	0.194	0.073	0.680	0.165		0.157	0.000	0.082	25.722	1.445
	1984	0.725	0.368	3.375	0.141	41.071	10.831		0.000	22.711	0.656
	1985	0.319	0.247	0.402	0.507	34.328	1.341		109.917	6.642	0.069
	1986	1.226	0.281	1.854	1.029	7.531	0.305		22.747	1.291	0.104
	1987	0.373	3.741	4.796	1.907	11.778	3.720	0.442	0.000	17.791	3.190
	1988	0.258	0.353	1.018	0.692	11.150	3.049	0.362	0.318	7.254	0.131
	1989	0.035	0.139	1.109	0.179	44.069	4.890	0.265	0.253	3.061	6.374
	1990	0.021	0.304	0.665	0.229	25.514	1.293	0.183	0.135	216.002	14.577
	1991	0.216	5.226	1.545	3.547	30.842	7.066	0.262	0.090	4.531	4.166
	1992	0.000	0.000	0.041	0.483	15.590	7.094	0.048	0.068	0.000	0.116
	1993	0.648	0.956	1.119	0.445	23.866	3.271	0.101	0.013	6.808	7.761
	1994	0.440	0.140	4.090	4.329	17.025	14.900	0.116	0.084	0.047	0.047
	1995	0.042	0.554	0.113	2.669	25.200	6.369	0.300	0.125	5.098	1.231
	1996	0.036	0.057	2.686	0.033	41.862	0.475	0.289	0.257	0.054	5.374
	1997	0.118	16.383	0.805	6.563	12.251	28.164	0.079	0.100	0.197	0.000
	1998	0.424	10.356	0.876	13.768	11.457	24.353	0.018	0.212	0.166	0.000
	1999	0.362	1.435	1.602	17.117	36.130	14.169	0.016	0.428	0.166	0.000
	2000	0.091	0.081	0.111	0.477	24.718	1.258	0.163	0.144	0.166	0.000
	2001	0.112	0.064	0.166	2.478	29.749	5.911	0.063	0.010	0.197	0.000
	2002	0.037	0.099	0.225	2.978	12.579	3.015	0.005	0.090	0.224	0.000
	2003	0.111	0.000	0.134	0.081	25.630	1.710	0.012	0.000	0.448	0.000
	2004	0.033	0.256	0.116	1.963	0.008	0.008	2.167	0.339	0.053	0.000
								0.456	0.000	0.440	0.000
										6.076	1.768

Table 17. Correlations among juvenile indices by cohort group.

Survey	cohort	MA trawl spring	MA trawl summer	RI trawl spring	RI trawl summer	CT trawl spring	CT trawl summer	NY trawl spring	NY trawl summer	NJ trawl spring	NJ trawl summer	DE Adult trawl spring	DE Adult trawl summer	DE Juv Trawl spring	DE Juv Trawl summer	VA Seine summer	SEAMAP spring	NMFS Inshore summer	NMFS Inshore spring	NMFS Offshore summer	NMFS Offshore spring	REC CPUE age 0	REC CPUE age 1
MA trawl	spring	1.00																					
MA trawl	summer	0.01	1.00																				
RI trawl	spring	0.46	0.03	1.00																			
RI trawl	summer	0.10	0.50	0.06	1.00																		
CT trawl	spring	-0.23	-0.35	0.02	-0.11	1.00																	
CT trawl	summer	0.03	0.82	0.10	0.71	-0.22	1.00																
NY trawl	spring	-0.05	-0.13	0.48	-0.42	0.11	-0.39	1.00															
NY trawl	summer	0.11	0.06	0.45	0.51	0.26	0.12	0.35	1.00														
NJ trawl	spring	-0.11	-0.23	-0.09	-0.28	-0.25	-0.34	0.45	0.03	1.00													
NJ trawl	summer	0.22	0.02	0.28	-0.07	-0.35	0.00	0.45	-0.07	0.62	1.00												
DE Adult trawl	spring	0.06	-0.06	-0.09	0.43	0.29	-0.09	-0.27	0.37	-0.12	-0.44	1.00											
DE Adult trawl	summer	-0.08	-0.17	-0.21	0.24	0.25	-0.13	-0.17	0.22	-0.49	-0.33	0.63	1.00										
DE Juv Trawl	spring	0.34	0.23	0.21	0.03	-0.21	0.02	0.22	0.13	-0.04	0.12	0.40	0.11	1.00									
DE Juv Trawl	summer	-0.21	0.32	-0.33	0.25	-0.26	0.31	-0.17	0.05	0.21	0.13	0.29	0.55	0.20	1.00								
VA Seine	summer	0.57	-0.01	0.49	0.30	-0.46	0.35	-0.49	-0.07	0.31	0.78	-0.13	-0.28	-0.35	-0.09	1.00							
SEAMAP	summer	-0.39	0.06	-0.18	-0.16	0.09	-0.08	0.62	-0.01	0.14	0.36	-0.44	-0.38	0.06	-0.26	-0.26	1.00						
NMFS Inshore	spring	0.01	-0.17	0.11	-0.21	0.56	-0.06	0.18	0.24	0.19	-0.14	-0.20	-0.16	-0.15	0.11	-0.07	-0.05	1.00					
NMFS Inshore	summer	-0.15	-0.22	-0.21	-0.14	0.19	-0.14	-0.24	-0.20	0.32	-0.02	-0.06	-0.03	-0.15	0.18	0.38	-0.18	0.51	1.00				
NMFS Offshore	spring	-0.07	-0.17	-0.13	-0.23	0.46	-0.18	0.01	0.04	0.20	-0.20	-0.27	-0.24	-0.30	-0.01	-0.08	0.03	0.80	0.72	1.00			
REC CPUE	age 0	0.12	-0.09	0.14	0.28	0.61	0.17	-0.17	0.58	-0.33	-0.24	0.32	0.27	0.01	-0.22	0.10	-0.22	0.29	-0.04	0.10	1.00		
REC CPUE	age 1	-0.35	-0.07	-0.39	0.06	0.01	-0.09	-0.41	-0.16	-0.07	-0.46	0.47	0.52	-0.11	0.35	-0.05	-0.37	-0.08	0.08	-0.04	0.07	1.00	

Table 18. Atlantic coast bluefish biological reference points.

ASAP Reference Points using final year selectivity scales Max=1.0

Ref pt	F	slope to plot on SRR
F0.1	0.177	0.184
Fmax	0.276	0.264
F30%SPR	0.279	0.267
F40%SPR	0.199	0.200
Fmsy	0.190	0.193
Foy	0.143	-----
Fcurrent	0.146	0.162
SSmsy	142,104	
Rmsy	30,777	
SSoy	180,341	
MSY	18,483	
OY	17,881	
SSmsy_ratio	0.487	
Fmsy_ratio	0.769	
Bmsy ratio	0.701	

Thompson-Bell YPR

1982-2003 PR		Time series average			
age 0			F	Catch Wt (YPR)	SSB/R
0	0.337				
1	0.996				
2	0.934	F max	0.254	0.722	3.04
3	0.468	F 0.1	0.173	0.689	4.29
4	0.337	F 30%	0.257	0.722	3.00
5	0.696				
6	0.910	Fmsy	0.190		3.97
7+	1.000				
		Bmsy	147,052 (from stock/recruit and recruitment at F=0.19)		

F_{msy} =	0.19
F₂₀₀₄ =	0.15
B_{msy} =	147,052
B₂₀₀₄ =	92,337

Table19. Fishing mortality at age estimates from ADAPT model.

year	Age						F_{2-4}
	0	1	2	3	4	5	
1982	0.274	0.274	0.280	0.378	0.152	0.270	0.378
1983	0.112	0.307	0.417	0.540	0.254	0.404	0.565
1984	0.138	0.230	0.480	0.162	0.303	0.315	0.441
1985	0.152	0.179	0.312	0.400	0.150	0.287	0.402
1986	0.282	0.420	0.387	0.246	0.246	0.293	0.410
1987	0.159	0.536	0.527	0.479	0.278	0.428	0.599
1988	0.059	0.152	0.515	0.302	0.301	0.373	0.522
1989	0.087	0.281	0.370	0.392	0.114	0.292	0.409
1990	0.090	0.261	0.139	0.125	0.257	0.174	0.243
1991	0.132	0.252	0.462	0.173	0.077	0.237	0.332
1992	0.262	0.576	0.123	0.270	0.089	0.160	0.224
1993	0.112	0.441	0.172	0.056	0.178	0.135	0.190
1994	0.149	0.473	0.559	0.055	0.036	0.217	0.303
1995	0.121	0.391	0.190	0.096	0.039	0.108	0.152
1996	0.087	0.194	0.121	0.074	0.219	0.138	0.193
1997	0.116	0.327	0.201	0.136	0.095	0.144	0.201
1998	0.043	0.290	0.365	0.170	0.095	0.210	0.294
1999	0.068	0.165	0.374	0.118	0.047	0.180	0.252
2000	0.036	0.261	0.360	0.211	0.026	0.199	0.279
2001	0.039	0.349	0.338	0.257	0.083	0.226	0.317
2002	0.022	0.191	0.211	0.081	0.112	0.135	0.188
2003	0.020	0.133	0.221	0.144	0.074	0.146	0.205
2004	0.028	0.170	0.158	0.098	0.110	0.128	0.179
							0.122

Table 20. January 1 population size estimates (000s) from the ADAPT model.

year	Age						Total	
	0	1	2	3	4	5		
1982	51,171	44,730	12,803	8,487	6,219	5,648	13,049	142,107
1983	49,712	31,862	27,857	7,922	4,763	4,373	12,118	138,606
1984	60,939	36,388	19,201	15,025	3,778	3,025	9,800	148,157
1985	36,564	43,458	23,674	9,728	10,459	2,286	7,868	134,037
1986	23,121	25,719	29,760	14,191	5,337	7,369	14,584	120,081
1987	23,321	14,279	13,840	16,539	9,088	3,416	9,598	90,082
1988	32,968	16,281	6,839	6,693	8,388	5,635	7,392	84,195
1989	45,852	25,451	11,455	3,345	4,050	5,083	7,860	103,095
1990	34,854	34,412	15,738	6,481	1,850	2,957	12,534	108,827
1991	33,128	26,082	21,700	11,217	4,683	1,171	8,343	106,325
1992	10,101	23,780	16,593	11,194	7,726	3,550	5,428	78,372
1993	12,475	6,365	10,945	12,018	7,000	5,787	7,562	62,153
1994	15,639	9,135	3,353	7,542	9,306	4,798	4,505	54,277
1995	18,468	11,029	4,661	1,570	5,843	7,351	8,766	57,687
1996	22,568	13,404	6,107	3,156	1,167	4,600	8,755	59,757
1997	16,475	16,933	9,037	4,430	2,400	768	7,314	57,357
1998	17,940	12,015	10,000	6,052	3,167	1,788	1,977	52,940
1999	27,464	14,071	7,362	5,686	4,179	2,357	2,385	63,504
2000	21,048	21,007	9,767	4,145	4,139	3,264	704	64,074
2001	41,289	16,630	13,245	5,578	2,747	3,301	985	83,775
2002	29,237	32,528	9,604	7,731	3,531	2,071	2,664	87,365
2003	45,106	23,407	21,998	6,367	5,840	2,584	3,822	109,124
2004	16,545	36,190	16,780	14,433	4,515	4,440	4,313	97,216
2005	28,548	13,166	24,991	11,736	10,712	3,313	6,149	98,616

Table 21. Population biomass estimates (000s lbs) from ADAPT model

year	Age						Total	
	0	1	2	3	4	5		
1982	4,135	15,418	16,363	14,014	16,938	20,786	64,698	152,351
1983	2,456	7,726	19,403	14,321	12,122	16,441	67,582	140,050
1984	3,047	7,369	12,000	20,224	9,451	11,387	55,368	118,845
1985	1,653	8,692	14,929	13,033	23,759	7,790	39,758	109,614
1986	1,755	5,694	20,618	21,289	13,161	25,669	70,701	158,886
1987	1,532	2,709	10,524	25,750	23,815	12,015	47,836	124,181
1988	4,220	3,567	3,746	10,410	20,090	18,304	34,171	94,508
1989	3,040	5,747	7,459	4,870	11,064	17,358	37,100	86,637
1990	5,838	8,775	8,086	8,776	4,848	11,532	56,078	103,934
1991	2,779	6,865	12,838	13,840	10,325	4,196	41,423	92,267
1992	841	5,557	9,720	12,876	17,003	10,814	27,721	84,533
1993	1,506	1,955	6,662	19,223	15,901	17,424	36,905	99,576
1994	981	2,451	2,443	10,079	25,448	15,365	18,437	75,204
1995	1,952	2,534	2,918	1,959	13,525	25,818	41,166	89,873
1996	2,214	3,666	4,010	4,109	2,592	15,644	41,114	73,350
1997	997	4,985	6,114	6,534	5,522	2,628	33,643	60,423
1998	2,042	3,356	6,924	9,461	8,700	6,270	10,638	47,391
1999	2,120	4,465	5,470	7,970	11,865	8,801	12,328	53,019
2000	2,225	5,332	7,111	6,557	11,210	11,485	3,968	47,888
2001	3,563	4,548	8,570	8,856	8,914	12,183	5,346	51,980
2002	2,740	9,648	6,891	11,160	9,545	7,919	12,415	60,317
2003	2,797	7,221	16,314	10,145	14,359	8,419	15,707	74,962
2004	455	8,410	14,427	21,114	12,027	13,971	20,010	90,415

Table 22. Diagnostic information from preferred ASAP model run.

Component	Residual Sum Squares	Number Obs	Index Lambda	Likelihood value
Catch_Fleet_Total	0.0035	23	2000	7.058
CAA_proportions	N/A	161	see_below	203.9

objective function = 10116.6

Component	Residual Sum Squares	Number Obs	Index Lambda	Likelihood value
NEFSC 0	16.26	23	50	406.470
NEFSC 1	31.98	23	50	799.479
NEFSC 2	32.35	23	50	808.701
NEFSC 3	21.98	23	50	549.431
NEFSC 4	25.34	21	50	633.618
NEFSC 5	17.08	18	50	427.067
NEFSC 6	25.04	19	50	625.882
DE 0	17.51	13	50	437.674
DE 1	1.97	15	50	49.229
DE 2	8.29	13	50	207.237
NJ 0	14.46	17	50	361.496
NJ 1	15.78	17	50	394.376
NJ 2	23.95	17	50	598.866
CT 0	4.81	21	50	120.240
CT 1	17.05	21	50	426.235
CT 2	10.16	21	50	254.104
CT 3	12.35	21	50	308.684
CT 4	18.79	21	50	469.680
CT 5	24.95	21	50	623.822
CT 6	13.83	20	50	345.860
Rec CPUE 0	3.65	23	50	91.235
Rec CPUE 1	6.07	23	50	151.709
Rec CPUE 2	4.65	23	50	116.340
Rec CPUE 3	3.72	23	50	92.924
Rec CPUE 4	4.32	23	50	107.904
Rec CPUE 5	4.61	23	50	115.254
Rec CPUE 6	2.68	23	50	67.015
SEAMAP	12.90	14	50	322.448
Index_Fit_Total	396.52	563	1400	9912.980

Table 23. Fishing mortality at age estimates from ASAP catch at age model.

year	Age						F mult
	0	1	2	3	4	5	
1982	0.094	0.279	0.263	0.133	0.096	0.194	0.255
1983	0.105	0.311	0.293	0.148	0.106	0.216	0.284
1984	0.094	0.277	0.261	0.132	0.095	0.192	0.254
1985	0.089	0.263	0.247	0.125	0.090	0.182	0.240
1986	0.145	0.429	0.404	0.204	0.147	0.297	0.392
1987	0.155	0.458	0.431	0.218	0.157	0.318	0.419
1988	0.137	0.406	0.383	0.193	0.139	0.282	0.372
1989	0.118	0.349	0.328	0.166	0.119	0.242	0.319
1990	0.108	0.320	0.301	0.152	0.110	0.222	0.293
1991	0.139	0.411	0.387	0.196	0.141	0.285	0.376
1992	0.117	0.346	0.326	0.165	0.119	0.240	0.317
1993	0.113	0.333	0.314	0.159	0.114	0.231	0.305
1994	0.103	0.304	0.286	0.145	0.104	0.211	0.278
1995	0.084	0.248	0.233	0.118	0.085	0.172	0.227
1996	0.082	0.241	0.227	0.115	0.083	0.167	0.221
1997	0.095	0.280	0.264	0.133	0.096	0.194	0.256
1998	0.077	0.229	0.216	0.109	0.078	0.159	0.210
1999	0.068	0.201	0.189	0.096	0.069	0.140	0.184
2000	0.068	0.200	0.189	0.095	0.069	0.139	0.183
2001	0.076	0.223	0.210	0.106	0.077	0.155	0.204
2002	0.060	0.176	0.166	0.084	0.060	0.122	0.161
2003	0.065	0.191	0.180	0.091	0.066	0.133	0.175
2004	0.049	0.146	0.138	0.070	0.050	0.102	0.134
							0.146
selectivity at age	0.338	1.000	0.942	0.476	0.343	0.694	0.915

Table 24. January 1 population size estimates (000s) from the ASAP model.

year	Age							Total
	0	1	2	3	4	5	6+	
1982	61,381	50,364	14,431	6,956	6,952	14,105	21,385	175,573
1983	48,325	45,730	31,202	9,087	4,987	5,173	23,083	167,586
1984	52,904	35,618	27,444	19,066	6,417	3,671	17,638	162,757
1985	31,079	39,437	22,103	17,308	13,681	4,778	13,686	142,071
1986	23,235	23,281	24,827	14,129	12,504	10,236	12,070	120,281
1987	16,488	16,455	12,418	13,577	9,433	8,839	12,902	90,112
1988	22,043	11,561	8,522	6,605	8,938	6,601	12,214	76,484
1989	50,783	15,729	6,306	4,759	4,457	6,367	10,973	99,374
1990	23,044	36,951	9,087	3,718	3,301	3,238	10,622	89,960
1991	26,916	16,932	21,973	5,505	2,614	2,422	8,614	84,975
1992	13,379	19,175	9,190	12,214	3,706	1,859	6,332	65,855
1993	15,932	9,744	11,108	5,432	8,481	2,695	4,975	58,367
1994	18,428	11,654	5,718	6,646	3,795	6,195	4,755	57,191
1995	18,179	13,615	7,044	3,518	4,709	2,800	7,058	56,922
1996	18,458	13,687	8,701	4,567	2,560	3,542	6,537	58,052
1997	16,362	13,929	8,806	5,677	3,334	1,930	6,746	56,783
1998	24,271	12,185	8,617	5,537	4,068	2,480	5,575	62,732
1999	27,884	18,390	7,934	5,686	4,065	3,079	5,434	72,472
2000	16,711	21,328	12,314	5,375	4,231	3,107	5,893	68,958
2001	34,542	12,785	14,291	8,348	4,000	3,234	6,230	83,429
2002	27,780	26,221	8,372	9,480	6,145	3,034	6,425	87,457
2003	41,561	21,429	18,004	5,807	7,138	4,737	6,677	105,353
2004	15,850	31,893	14,488	12,309	4,340	5,473	7,984	92,337

Table 25. Population biomass estimates (000s lbs) from ASAP model

year	Age							Total
	0	1	2	3	4	5	6+	
1982	4,960	17,360	18,444	11,485	18,933	51,909	106,028	229,120
1983	2,387	11,089	21,733	16,426	12,692	19,448	128,733	212,508
1984	2,645	7,213	17,152	25,664	16,052	13,817	99,649	182,192
1985	1,405	7,888	13,938	23,188	31,078	16,281	69,157	162,934
1986	1,764	5,154	17,200	21,196	30,834	35,657	58,514	170,318
1987	1,083	3,122	9,442	21,138	24,719	31,090	64,303	154,897
1988	2,822	2,533	4,668	10,273	21,407	21,443	56,461	119,605
1989	3,367	3,552	4,106	6,929	12,175	21,742	51,793	103,664
1990	3,860	9,422	4,669	5,034	8,649	12,627	47,525	91,787
1991	2,258	4,457	12,999	6,792	5,763	8,678	42,769	83,716
1992	1,114	4,481	5,383	14,049	8,156	5,662	32,339	71,185
1993	1,923	2,993	6,761	8,688	19,266	8,114	24,279	72,025
1994	1,156	3,127	4,166	8,882	10,378	19,839	19,459	67,007
1995	1,921	3,128	4,410	4,389	10,901	9,835	33,144	67,728
1996	1,811	3,743	5,713	5,946	5,685	12,046	30,700	65,644
1997	990	4,100	5,958	8,374	7,671	6,603	31,031	64,727
1998	2,763	3,403	5,966	8,657	11,174	8,695	29,999	70,657
1999	2,152	5,835	5,895	7,970	11,542	11,497	28,086	72,978
2000	1,767	5,413	8,965	8,503	11,458	10,932	33,218	80,255
2001	2,981	3,496	9,247	13,253	12,981	11,935	33,814	87,707
2002	2,603	7,777	6,007	13,685	16,611	11,600	29,944	88,228
2003	2,577	6,611	13,352	9,253	17,551	15,432	27,439	92,216
2004	436	7,411	12,457	18,007	11,562	17,222	37,041	104,136